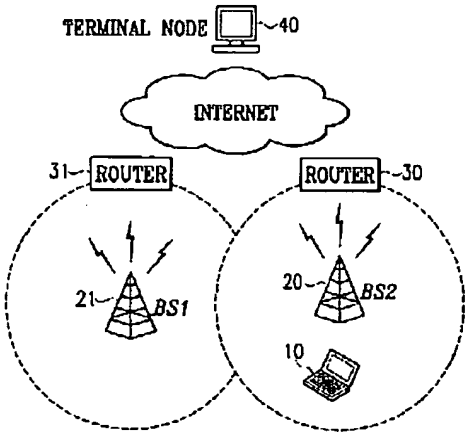
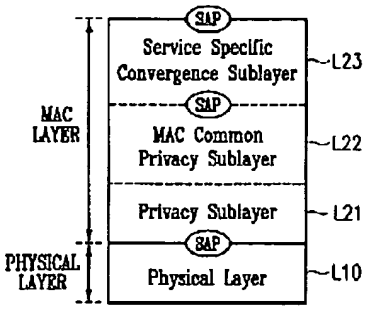
WO 2005/057321 PCT/KR2004/003212

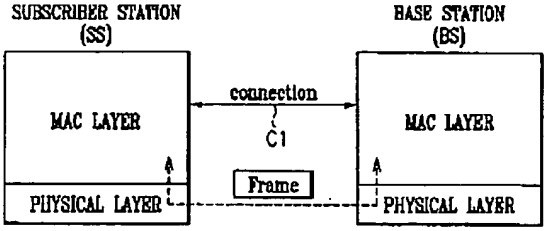
[Fig. 1]



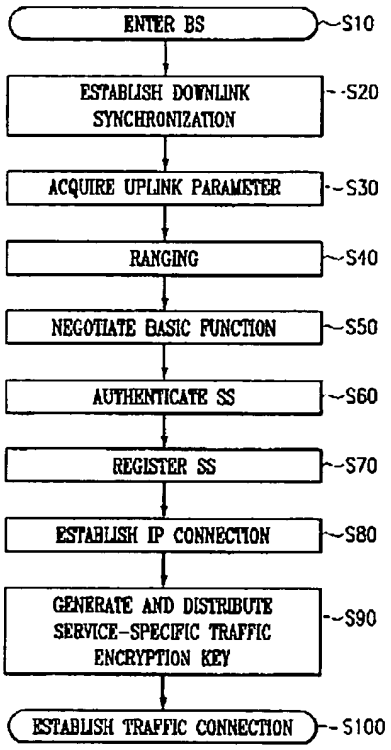
[Fig. 2]


SAP
Service Specific Convergence Sublayer
L23
SAP
MAC Common Privacy Sublayer
L22
Privacy Sublayer
L21
SAP
Physical Layer
L10
MAC LAYER
PHYSICAL LAYER

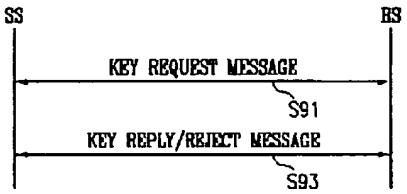
[Fig. 3]


SUBSCRIBER STATION
(SS)
BASE STATION
(BS)
MAC LAYER
connection
C1
MAC LAYER
Frame
PHYSICAL LAYER
PHYSICAL LAYER

[Fig. 4]


ENTER BS
S10
ESTABLISH DOWNLINK SYNCHRONIZATION
S20
ACQUIRE UPLINK PARAMETER
S30
RANGING
S40
NEGOTIATE BASIC FUNCTION
S50
AUTHENTICATE SS
S60
REGISTER SS
S70
ESTABLISH IP CONNECTION
S80
GENERATE AND DISTRIBUTE SERVICE-SPECIFIC TRAFFIC ENCRYPTION KEY
S90
ESTABLISH TRAFFIC CONNECTION
S100

[Fig. 5]



[Fig. 6]

Attribute	Contents
Service Type	Service Type (Unicast or multicast or broadcast)
Multicast Service Group ID	Identifier of multicast service group

[Fig. 7]

Type	Length	Value
28	1	0: Unicast Service 1: Multicast Service 2: Broadcast Service 3-255: Reserved

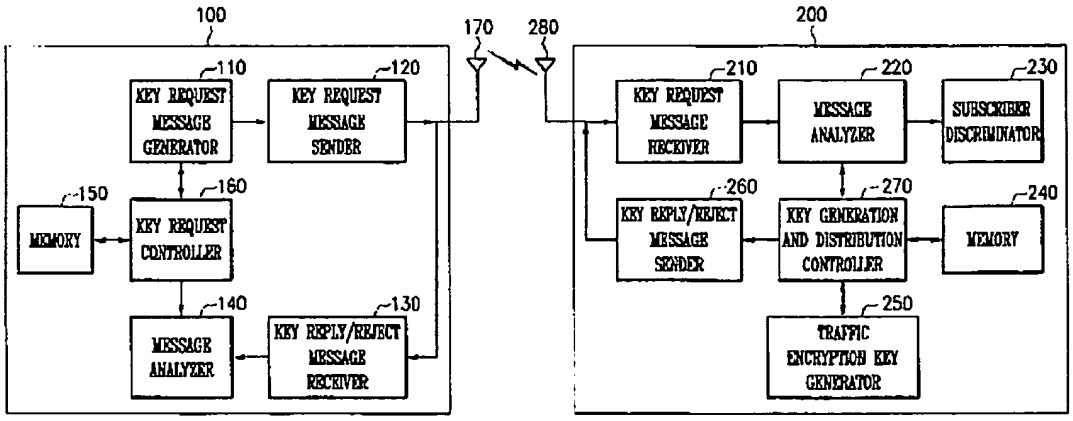
[Fig. 8]

Type	Length	Value
29	1	Identifier of the multicast service group

[Fig. 9]

Error Code	Messages	Contents
7	Key Reject	Unsupported Service Type
8	Key Reject	Unauthorized Multicast Service Group ID

[Fig. 10]


100
170
280
200
110
KEY REQUEST MESSAGE GENERATOR
120
KEY REQUEST MESSAGE SENDER
150
MEMORY
160
KEY REQUEST CONTROLLER
140
MESSAGE ANALYZER
130
KEY REPLY/REJECT MESSAGE RECEIVER
210
KEY REQUEST MESSAGE RECEIVER
220
MESSAGE ANALYZER
230
SUBSCRIBER DISCRIMINATOR
260
KEY REPLY/REJECT MESSAGE SENDER
270
KEY GENERATION AND DISTRIBUTION CONTROLLER
240
MEMORY
250
TRAFFIC ENCRYPTION KEY GENERATOR